

CLAIMS:

1. A multi-stack optical information carrier for recording information by means of a laser beam, said optical information carrier comprising:

- a substrate layer,
- at least two recording stacks, each comprising a recording layer, at least one heat sink layer and dielectric layers between said recording layer and said at least one heat sink layer,
- at least one spacer layer separating the at least two recording stacks, and
- a cover layer,

characterized in that at least one recording stack further comprises at least one thermochromic layer having temperature-dependent optical characteristics for improving the sensitivity of at least one of said recording stacks during recording.

2. A multi-stack optical information carrier as claimed in claim 1, characterized in that said at least one thermochromic layer has a temperature-dependent absorption characteristic.

3. A multi-stack optical information carrier as claimed in claim 2, characterized in that said thermochromic layer is essentially made of a thermochromic dye, in particular cyanine or phthalocyanine dye.

4. A multi-stack optical information carrier as claimed in claim 1, characterized in that said at least one thermochromic layer has a temperature-dependent reflection characteristic.

25 5. A multi-stack optical information carrier as claimed in claim 4, characterized in that said thermochromic layer is essentially made of vanadium dioxide.

6. A multi-stack optical information carrier as claimed in claim 1, characterized in that each recording stack comprises at least one thermochromic layer.

7. A multi-stack optical information carrier as claimed in claim 1, characterized in that at least one recording stack comprises a thermochromic layer on both sides of the recording layer and dielectric layers for separating the thermochromic layers from the recording layer.

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8. A multi-stack optical information carrier as claimed in claim 1, characterized in that said recording layers are made of a phase-change material.

10 9. A multi-stack optical information carrier as claimed in claim 1, characterized in that said recording layers are made of a write-once material.